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Research on the Abnormal Growth of Chinese Household Savings Under the Effect of "Negative Interest Rate"

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Abstract

At present, China has once again entered the era of negative interest rate, but China's residents' savings have shown a phenomenon of extraordinary growth. The coexistence of negative interest rate and high savings makes the effect of savings rate weaken the effect of monetary policy. This paper conducts an empirical quantitative analysis of the nominal interest rate, real interest rate and the growth rate of Chinese residents' savings from 1978 to 2017, in order to and studies the influence and change relationship between the nominal interest rate and real interest rate on Chinese savings. The results show that the nominal interest rate and Chinese household savings change in the same direction, while the real interest rate changes in the opposite direction. In the long run, the sensitivity of both nominal and real interest rates to savings decreases and tends to be stable. It is concluded that savings are still the means of maintaining and increasing the value of the public residents when the inflation rate is relatively obvious. The author analyzes the reasons and disadvantages on this basis. Finally, it points out that we should stick to the general direction of interest rate liberalization reform, improve residents' consumption ability, and deal with the negative interest rate effect with "Chinese characteristics" flexibly.

Key words: Negative interest; Rate China's household savings; Extraordinary growth

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INTRODUCTION

The interest rate is the price that the borrower pays to the lender for obtaining the right to use the monetary fund, or the reward that the owner of the currency gets from the borrower for temporarily transferring the right to use the monetary fund. That is: the ratio of interest to principal in a given period of time, usually expressed as a percentage. Following Fisher's explanation of interest rate, interest rate can be divided into nominal interest rate and real interest rate. Nominal interest rate refers to the published interest rate without adjusting inflation factors, while real interest rate excludes the impact of inflation on it on the basis of nominal interest rate.

In recent years, the academic world is not unfamiliar with the term negative interest rate, and there are mainly two explanations: one is that the nominal interest rate is negative, turning the usual deposit rate into negative; Second, the real interest rate is negative. That is, the one-year fixed deposit interest rate is less than the CPI inflation rate in the same period. Nominal interest rates are explicit and easily perceived by the masses; Real interest rates are hidden and not easily visible to the public.

Since the reform and opening up in 1978, China has entered the era of negative interest rate for eight times (the real interest rate is negative (Figure 1), but at the same time, China has maintained high savings (Figure 2). Under the negative interest rate effect, the excessively long growth of China's savings will affect the effectiveness of interest rate policy. In order to more accurately discuss the role of negative interest rates on Chinese residents' savings deposits, this paper uses empirical analysis to study the correlation between interest rates in 1978-2017 and the growth rate of savings deposits in China.

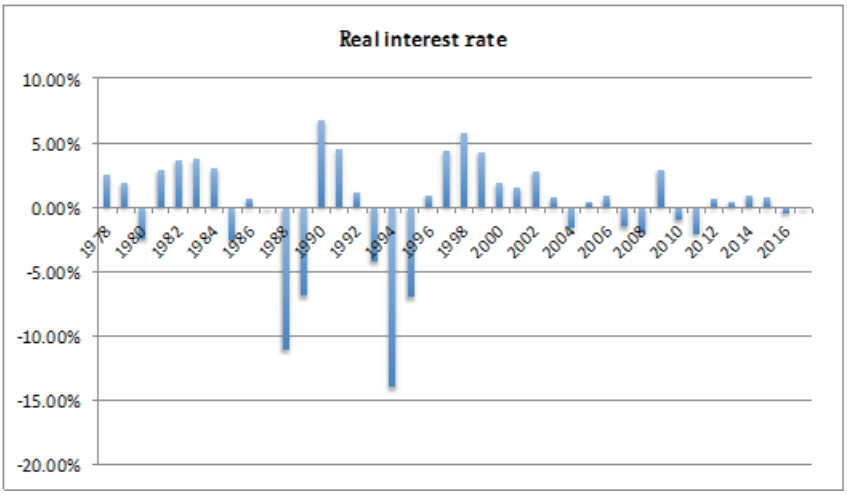

Figure 1
Changes in real interest rates from 1978 to 2018
Source: China Statistical Yearbook

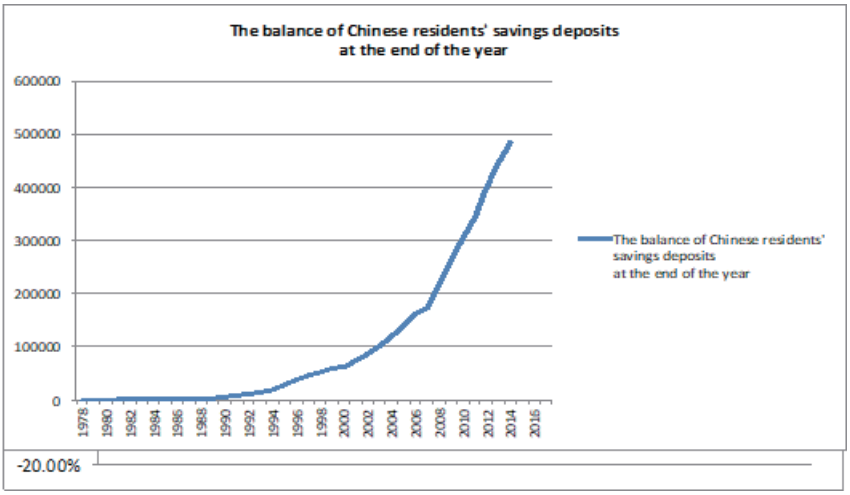

Figure 2
Changes in the year-end balance of Chinese residents' savings deposits from 1978 to 2018
Source: China Statistical Yearbook

1. THEORIES AND LITERATURE REVIEW

There has been a lot of research on the correlation between interest rates and savings.

Marshall of the classical school explained the relationship between the two: the interest rate provided for capital is the demand price of savings... The desire to save when the interest rate rises is almost a universal law, and the increase of interest rate tends to increase the ability to save. According to classical economic theory, interest rate is positively correlated with savings: interest rate is the reward that investors are willing to pay to savers. When interest rate rises, savers will be willing to increase savings. As interest rates rise savers can earn more interest income, which further increases their ability to save.

In the 1930s, Keynes introduced interest rate into the macro economy for the first time. Through the interest rate transmission mechanism, he adjusted the money supply to affect the interest rate level, and then affected investment and savings, thus creating a precedent for the interest rate policy to regulate the economy. Keynes believed that interest rates were determined by the supply and demand of money. Money supply is an exogenous variable, which is determined by the central bank. The central bank influences the equilibrium interest rate in the money market by adjusting the money supply. The lower interest rate stimulates investment and reduces savings, and then influences the total income of the commodity market through multiplier effect. It can be seen that interest rate is the link of the transmission path of monetary policy and constitutes the whole process of the transmission mechanism of monetary policy. However, keynesians also pointed out that the interest rate should be regulated by the government rather than the market, and then pointed out that the market interest rate has a limited regulating effect on savings, while the greater impact on savings is on income.

Classical economics analyzes interest rates from the perspective of physical factors, and thinks that savings

and investment determine interest rates. Keynesian school from the perspective of monetary factors, money supply and demand to determine the interest rate. New classical comprehensive school debate, in interest rate decision problem that classical interest rate theory, Keynes's theory of monetary supply and demand have one-sided sex, but should consider both the real factors have consider monetary factors effect on interest rate decision, by the physical factors determine the commodity market equilibrium IS curve, LM are obtained by monetary factors determine the money market equilibrium curve, it can be savings, investment, liquidity preference and the money supply in an equilibrium system at the same time, the balanced interest rate level IS obtained by is-lm curve, the equilibrium interest rate level IS the commodity market and money market reaches an equilibrium state at the same time. It can be obtained from is-lm analysis that the amount of money supply can affect the level of interest rate, which in turn can further affect savings and investment. Therefore, it IS logical to regulate the interest rate through monetary policy and thus regulate macro and micro economy.

Scholars in literature research mainly have the following views. There is a positive correlation between the two. Fry (1978) studied the relationship between savings and interest rates in Asian countries and found that there was a certain positive relationship between them.Zhang Wenzhong (1989) made an empirical analysis by using an econometric model and pointed out that the short-term real interest rate did not affect the growth of savings, while the long-term real interest rate had a positive impact on savings. Zheng Baoyin (2008) pointed out that negative interest rate can lead to the decline of social savings and stimulate China's economic growth, but at the same time lead to the depreciation of deposits and the decline of wealth, etc., interest rate control should be relaxed to eliminate negative interest rate. Wu Cong (2013) studied the correlation between negative interest rate and China's economic growth and pointed out that negative interest rate can stimulate the increase of consumption and reduce savings to stimulate economic growth.

There is an inverse correlation between the two. Wang Guosong (1999) pointed out that there was a significant negative correlation between savings deposits and real interest rates, and explained this phenomenon from the perspective of financial constraint theory. Li Yan (1999) pointed out that empirical analysis showed that there was a weak negative effect between interest rate and savings rate. Xie Ping (2000) believed that the negative interest rate policy did not realize the transfer of savings deposits to the capital market under China's national conditions, and the negative interest rate would bring losses to the real interest rate of residents. Zhang Rui (2017) studied the sensitivity of household savings in China under the negative interest rate, and found that the real interest rate was inversely proportional to the number of household savings, and the decline of the real interest rate would lead to the increase of household savings, and explained the reasons for the coexistence of negative interest rate and high savings. Wei Jing and Zhu Junjie (2014) empirically investigated the relationship between interest rates and residents' savings through EG two tests, and concluded that the real interest rate has an insignificant negative impact on residents' savings, while the real interest rate has a significant time-lag effect on residents' savings.

Other scholars believe that there are other factors besides negative interest rates that cause China's high savings. Charles Yuji Horioka (2007) believes that interest rate, income growth rate and population growth rate are the reasons for China's high savings rate, and predicts that the savings rate will continue to rise. Liang Da(2008) points out that the household savings increase is due to uncertain factors increase, personal investment channel is narrow, and the income factors, etc., should be to introduce more investment channels, reasonable optimizing the allocation of assets, correctly handle the problem of high savings under negative interest rates.

As for the previous research, the author believes that the discrimination between nominal interest rate and real interest rate is ignored, and the default has the same effect on the reduction of Chinese savings, but the inflation rate affects the consistency of the direction of the two changes. Under the negative interest rate effect, the interest rate has a limited stimulus to the reduction of Chinese savings, which makes the interest rate policy and monetary policy partially dysfunctional, and is not conducive to the effective allocation of social resources, so the effect on economic development is limited. Therefore, it is necessary to conduct empirical research on interest rate and Chinese savings, explore the reasons behind it and put forward countermeasures and Suggestions based on China's reality.

2. EMPIRICAL ANALYSIS OF THE RELATIONSHIP BETWEEN INTEREST RATE AND THE GROWTH OF HOUSEHOLD SAVINGS IN CHINA

2.1 Data Selection

In order to study the correlation between interest rate and Chinese residents' savings deposit, the author selects the growth rate of Chinese residents' savings deposit and the real interest rate for analysis. In order to analyze the correlation between the real interest rate and China's economic growth in different periods, this paper sets the nominal interest rate as the one-year deposit rate. The real interest rate is the one-year deposit rate, excluding the current year's inflation rate; The growth rate of China's household savings deposits is measured by the growth

rate of the year-end balance of China's household savings deposits. This paper selects the data of the year-end balance of Chinese residents' savings deposit, the one-year deposit interest rate of financial institutions and the inflation rate from 1978 to 2017 for an in-depth analysis on the basis of calculating the growth rate of Chinese residents' savings deposit and the real interest rate. Among them, it is set that the year-end balance of Chinese residents' savings deposits is represented by S, the growth rate of Chinese residents' savings deposits is represented by Y, the real interest rate is represented by X, the nominal interest rate is represented by IR, and the inflation rate is represented by CPI. Their relationship can be calculated by the following formula:

$$Y = (S_t - S_{t-1})/S_{t-1} \quad (1)$$

$$X_t = IR_t - CPI_t \quad (2)$$

All data were collected from the national bureau of statistics website and the China statistical yearbook.

2.2 Sample Data Characteristics

Through the above data, the correlation between the growth rate of Chinese residents' savings deposits and the real interest rate is obtained, as shown in figure 3. The following analysis can be obtained by observing the basic characteristics of the changes of the two indicators in the graph: firstly, observe the basic characteristics of the real interest rate. Overall, real interest rates move around zero. Before 2000, the real interest rate fluctuated greatly, and negative interest rate appeared for the first time in 1980. After 2000, the fluctuation range was relatively moderate, and it was often accompanied by negative interest rate. Secondly, observe the basic characteristics of the growth rate of Chinese residents' savings deposits. On the whole, the growth rate of China's household savings deposits has been maintained at a relatively high level, especially before 2000, and has declined since 2000. Thirdly, by comparing the two indicators, we can see that the real interest rate and the growth rate of Chinese residents' savings deposits basically show an inverse relationship.

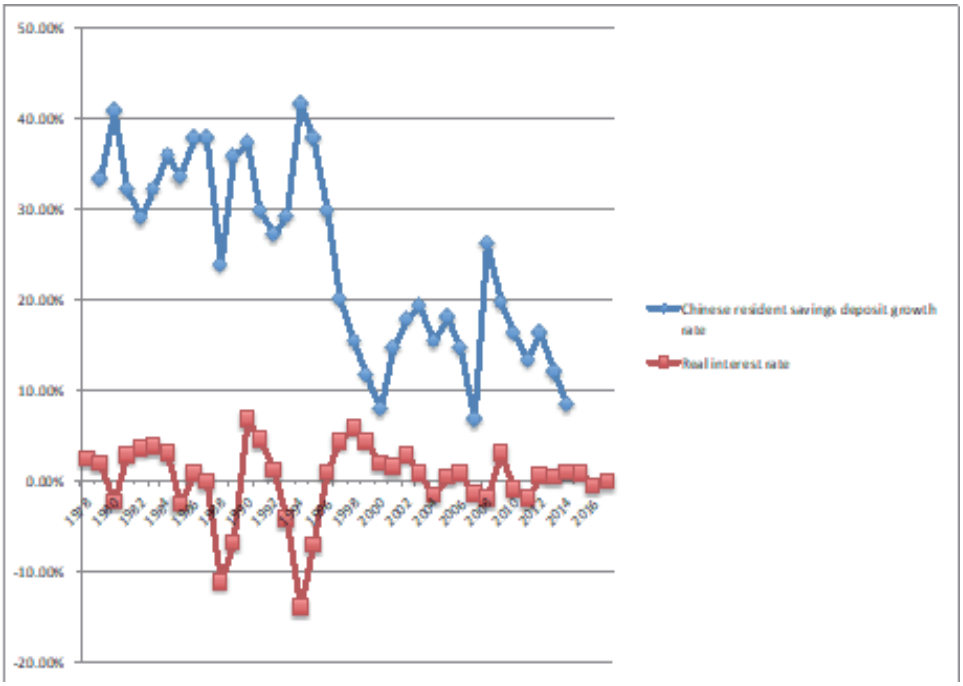

Figure 3
China residents' savings deposit growth rate and real interest rate changes
Source: National Bureau of Statistics website, China Statistical Yearbook.

2.3 Establish Regression Model

The basic idea of establishing a regression model is to first do unit root test to see whether the variable sequence is stationary. If it is stationary, the regression model can be constructed directly. If it is not stationary, then the difference of the variable sequence is required. When the difference reaches the ith difference, the sequence is stationary, and then it is proved to be an integral of order I. In the second step, the Granger causality test is carried out to test "who causes who changes" among variables, that is, the causal relationship. The third step is to establish a regression model to explain the effect of real interest rate on the growth rate of Chinese residents' savings deposits.

2.3.1 Unit Root Test

Unit root test is the stationarity test of sequence. If the stationarity of sequence is not tested, the regression analysis of model is set directly, which will easily lead to "pseudo-regression". In order to avoid the phenomenon of "pseudo-regression" in the later set model, Eviews7 is used to conduct ADF stationarity test for the time series of data and ADF unit root test for the original sequence (Table 1). The results show that: from 1978 to 2017, the critical

value of time series X and Y at the significance level (1%, 5%, 10%) is less than the ADF statistic, indicating that these two time series are non-stationary series. Therefore, the first-order difference operation of the original sequence can obtain the ADF unit root test results after the first-order difference of the sequence and obtain the stationary sequence.

Table1
ADF Unit Root Test (1978-2017)

Variable	ADF test	Critical value (significance level)	Prob	Is it smooth?
X	−2.489963	−2.632688（1%） −1.950687（5%） −1.611059（10%）	0.0143	No
Y	−1.241093	−2.632688（1%） −1.950687（5%） −1.611059（10%）	0.1930	No
DX	−6.572918	−2.632688（1%） −1.950687（5%） −1.611059（10%）	0.0000	Yes
DY	−7.016194	−3.639407（1%） −2.951125（5%） −2.614300（10%）	0.0000	Yes

2.3.2 Granger Causality Test

After the stationarity test of the time series, the Granger causality test is carried out for the two stationary series, the growth rate of household savings and the real interest rate after the first difference of the time series. The following results can be obtained:

Table 2
Granger Causality Test

Pairwise Granger Causality Tests
Date:11/24/18 Time:18:29
Sample:1978 2017
Lags:2

Null Hypothesis:	Obs	F-Statistic	Prob.
DX does not Granger Cause DY	33	7.14005	0.0031
DY does not Granger Cause DX		1.42561	0.2573

It can be seen from the test results that when the number of lag periods k=2, the probability value of the original hypothesis that "the actual interest rate is not the Granger cause of the growth rate of the household savings" is rejected is 0.0031<0.05, so the original hypothesis is rejected, that is, the actual interest rate is There is a causal relationship between Granger's reasons for the growth of household savings.

2.3.3 Least Squares Regression Analysis

According to the granger causality test above, it can be concluded that there is indeed a long-term equilibrium relationship between the real interest rate and the growth rate of household savings in China. In this case, a more detailed regression analysis is followed to further analyze the specific relationship between the two. Through the scatter diagram of the real interest rate after the first difference and the growth rate of Chinese household savings (see Figure 4), it can be seen that there is basically a linear relationship between them.

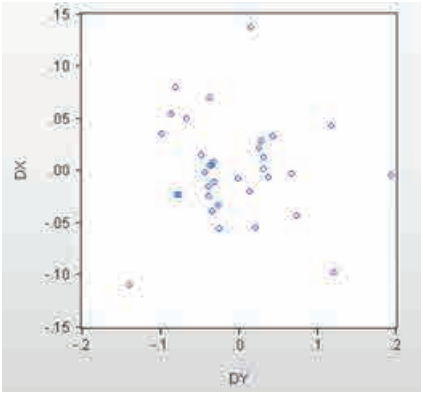

Figure 4
Scatter diagram of the real interest rate after the first difference and the growth rate of China's household savings

Establish the following regression model:

$$dY_t = \beta_0 + \beta_1 dX_t \quad (3)$$

The regression estimation result of equation (3) is obtained. The result shows that at the 5% significance level, the P value of F test is greater than 0.05, and the equation as a whole is not significant. The previous model needs to be revised to re-establish the regression model, as follows:

$$dY_t = \beta_0 + \beta_1 dX_{t-1} \quad (4)$$

Table 3
Regression Model (4) Regression Results

Dependent Variable: DY
Method: Least Squares
Date: 11/26/18 Time: 13:03
Sample (adjusted): 1980 2014
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	*t*-Statistic	Prob.
C	-0.00754	0.010496	-0.718345	0.4776
DX(-1)	-0.639501	0.224459	-2.849078	0.0075
R-squared	0.197417	Mean dependent var		-0.007149
Adjusted R-squared	0.173096	S.D. dependent var		0.068278
Sum squared resid	0.127214	Schwarz criterion		-2.576192
Log likelihood	48.6387	Hannan-Quinn criter.		-2.634388
F-statistic	8.117247	Durbin-Watson stat		2.6602
Prob (F-statistic)	0.007495			

The regression results of regression model (4) show that, at the 5% significance level, the P value of F test is less than 0.05, and the overall significance of the equation is significant. The estimation result of the regression equation is valid. The regression equation shows that for every 1 percentage point reduction in the real interest rate, China's household savings deposit increases by 0.64 percentage points, and the real interest rate is negatively correlated with the growth rate of China's household

savings deposit. However, according to the above results, although the regression results are significant, the correlation coefficient R is 0.197417, less than 20%, indicating a weak correlation between the two.

Through the previous empirical analysis, it can be seen that the granger causes the real interest rate and the growth rate of Chinese residents' savings deposit, and they are negatively correlated. The decrease of the real interest rate, on the contrary, promotes the growth of Chinese residents' savings deposit. Negative interest rate is a special situation when the real interest rate decreases, which can confirm the coexistence of negative interest rate and high savings.

2.3.4 Model Reconstruction

It can be concluded from the above model that, under the effect of negative real interest rate, China's savings showed extraordinary growth, but after model analysis, the correlation between the two was not strong. In order to further clarify the relationship between savings and interest rates, the K-order vector autoregressive model is established, as follows.

$$H_t = A_1 H_{t-1} + \cdots + A_k H_{t-k} + e_t$$

Among them, $H_t = \begin{pmatrix} Y_t \\ X_t \\ IR_t \end{pmatrix}$, $A_1, \cdots A_k$ Is a 3×3 matrix, said white noise, is mainly used to test whether there is a long-term and stable relationship between variables, further explore the savings affected by interest rates. On the basis of the above, the variables without ADF test were tested, and the results showed that all variables were first-order single integration sequence, and the full association integration test premise. Therefore, the multivariate Johnsen co-integration test was carried out, and the lag order was determined to be 1 according to the akaschi information criterion AIC and the Schwartz criterion SC minimum principle. On this basis, Johnsen co-integration test was carried out (Table 4).

Table 4
Johnsen Cointegration Test
Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical value	Prob.**
None *	0.731565	74.22197	29.79707	0
At most 1 *	0.467419	30.82213	15.49471	0.0001
At most 2 *	0.262128	10.03149	3.841466	0.0015

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Table 5 results show that Trace Statistic is greater than the critical value under the 5% confidence level, the null hypothesis can be rejected, and there is a cointegration relationship between variables. The following model can be obtained:

$$\begin{pmatrix} DY_t \\ DX_t \\ DIR_t \end{pmatrix} = \begin{pmatrix} C_1 \\ C_2 \\ C_3 \end{pmatrix} + \begin{pmatrix} A_1 \\ A_2 \\ A_3 \end{pmatrix} \begin{pmatrix} DY_{t-1} \\ DX_{t-1} \\ DIR_{t-1} \end{pmatrix}$$

Next, parameter estimation of the above model can be obtained:

$$\begin{pmatrix} DY_t \\ DX_t \\ DIR_t \end{pmatrix} = \begin{pmatrix} -0.4241 & -0.5207 & 2.1904 \\ -0.1673 & -0.0561 & -0.9461 \\ -0.0593 & -0.1569 & 0.1958 \end{pmatrix} \begin{pmatrix} DY_{t-1} \\ DX_{t-1} \\ DIR_{t-1} \end{pmatrix} + \begin{pmatrix} -0.1699 & -0.2005 & 0.2065 \\ -0.3604 & -0.6071 & 1.6047 \\ 0.0402 & -0.0357 & -0.0187 \end{pmatrix} \begin{pmatrix} DY_{t-2} \\ DX_{t-2} \\ DIR_{t-2} \end{pmatrix} + \begin{pmatrix} -0.0100 \\ -0.0045 \\ -0.0008 \end{pmatrix}$$

F-statistic = (4.3171 2.5725 5.6459)
R-squared = (0.4991 0.3725 0.5658)

According to the research purpose of this paper, an estimation formula can be obtained in the VAR model, and the equation between the three variables is:

$$DY_t = -0.4241 DY_{t-1} - 0.5207 DX_t + 2.1904 DIR_{t-1}$$

F=4.31712.840, so F test can be passed at 5% confidence level. The degree of fit is much better than the above model.

It can be seen from the model that savings are one year behind and the real interest rate is inversely proportional to the nominal interest rate. Moreover, savings are less affected by one lag and real interest rate, and more affected by nominal interest rate.

If the estimated VAR model is unstable, some of the results obtained are invalid. Next, the stability of AR root needs to be verified to determine the stability of the VAR model. The test results are as follows (Figure 5). It can be seen from the results that all root modules of the VAR model are in the unit circle, indicating that the model is stable and effective.

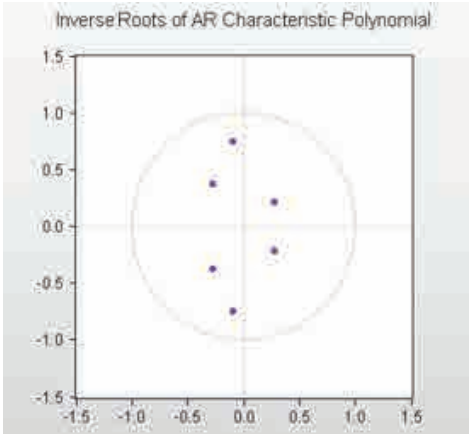

Figure 5
AR root test

After verifying that the VAR model is effective, impulse response analysis can be performed on it. According to this article research goal, the following analysis of the impacts of the real interest rate, nominal

interest rates on savings, relevant results available: Figure 6 shows that first of all to itself after the impact of one standard deviation, a larger negative impact, the effect after the first increased, effect weakened by period, can illustrate the effect of savings in their impact at first, then decreases gradually, so the long term savings has the characteristics of stability development of our country.

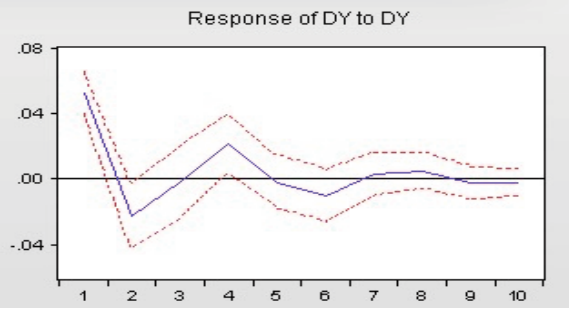

Figure 6
The shock response curve of savings

Figure 7 shows that after a shock to the real interest rate, the negative effect of savings is obvious at first, reaches the peak in the second period, and then the effect weakens gradually and finally tends to stabilize.

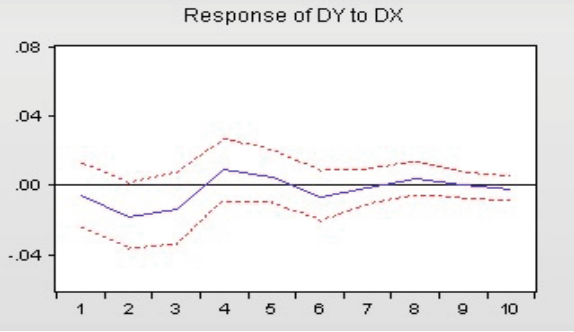

Figure 7
Shock response curves of real interest rates

Figure 8 shows that after a shock to the nominal interest rate, the positive effect of savings is obvious at the beginning, reaches the peak in the second period, and then the effect weakens gradually and finally tends to be stable. It can be seen that in the short term, savings themselves, real interest rates and nominal interest rates have a greater impact on savings, while in the long term, the impact on savings is not significant. This reflects that neither real interest rate nor nominal interest rate has much effect on savings.

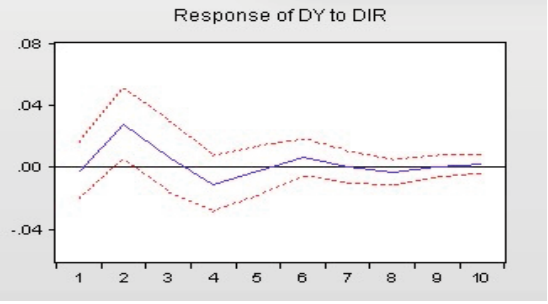

Figure 8
Shock response curves of nominal interest rates

Through the linear regression model and vector autoregression model, the conclusion can be drawn that the negative correlation between China's savings and the real interest rate is significant, and the decrease of the real interest rate makes China's savings show the opposite change and then increase the amount of savings. However, the nominal interest rate has a positive impact on China's savings, and can affect the change of China's savings by a larger coefficient than the real interest rate, which can partly explain the phenomenon of extraordinary growth of China's savings under the negative interest rate effect. In the long run, the impact of interest rate on China's savings tends to be stable. Therefore, the real and nominal interest rates have less and less impact on savings, and the sensitivity of interest rates to savings gradually decreases.

2.3.5 Inference

On the basis of the above conclusion, the nominal interest rate and real interest rates on China's savings effect is on the contrary, the nominal interest rate and real interest rates, the number of relations between high nominal interest rates are often associated with a higher rate of inflation, the real interest rate is reduced more, show the change of nominal interest rate and real interest rates in the opposite direction. The main reason why the nominal interest rate and the real interest rate have different effects on China's savings is the inflation rate.

3. ANALYSIS OF THE CAUSES AND DISADVANTAGES OF THE ABNORMAL GROWTH OF CHINESE SAVINGS UNDER THE "NEGATIVE INTEREST RATE"

Theoretically speaking, the deposit interest rate of financial institutions decreases, which will stimulate residents to increase consumption and reduce savings due to the reduced opportunity cost of immediate consumption. But the interest rate effect fails in the application of savings in our country. First, both nominal and real interest rates are manifestations of interest rates, but they have very different effects on Chinese savings. Nominal interest rates have a positive effect on savings, while real interest rates have a negative effect on savings. This is because most residents in China are hard to distinguish the nominal interest rate from the real interest rate, and they ignore the impact of the inflation rate on their savings. For the situation of being caught in the negative interest rate policy, residents cannot analyze the advantages and disadvantages brought by this policy, and they have relatively little psychological reaction to it.

Second, the consumption concept of Chinese residents is to ensure that savings do not decrease before consumption. Then, when residents' income does not change greatly, negative interest rate will not bring about great changes in savings, and corresponding

consumption will not increase significantly due to the arrival of negative interest rate. For most residents, the consumption has been consumed, and will not increase much because of the opportunity cost reduction of immediate consumption, which is inconsistent with the hypothesis of rational person in western economics.

Third, the savings of Chinese residents are not solely for interest income, but for a place of deposit. According to the central bank's survey, 40% of savers save their money for their children's education, retirement or to prevent accidents. Such deposits are rigid and less affected by negative interest rates. Fourth, there are many other factors that affect household savings in China, such as disposable income, real estate bubbles, the influence of traditional culture and the imperfect medical and pension systems. In recent years, China's real estate bubble is relatively serious, and the medical and pension systems are not perfect, which will increase the psychological expectation of residents' savings, reduce disposable income, and encourage residents to increase savings even in the era of negative interest rates, leading to the extraordinary growth of Chinese residents' savings.

The effect of negative interest rate on household savings in China is not consistent with the general interest theory, monetary policy and international performance. On the whole, the coexistence of negative interest rate and residents' savings seriously affects the effective allocation of social resources.

First, boosting domestic demand failed. The implementation of negative interest rate policy is to reduce the interest rate to stimulate consumption and investment, reduce savings, stimulate domestic demand, so as to stimulate economic growth.

Second, over-reliance on investment. Since savers are affected by negative interest rates and borrowers enjoy low costs, this will inevitably stimulate the society to invest a lot and stimulate economic growth. However, this will lead to overheated investment, such as the overheated real estate market, credit expansion and excessive corporate debt, which will increase social instability but fail to achieve the purpose of economic development.

Third, increasing inequality in the distribution of social wealth. Under the negative interest rate effect, the high savings of Chinese residents always exist, which makes the interests of household savers suffer. Is affected by negative interest rates policy will stimulate consumption and investment, but most of the low and middle income earners will not invest but tend to be more savings and savings in the era of negative interest rates continue to shrink, harm the interests of low and middle income earners, increased investment and high earners, gain more profits, leading to social the widening gap between the rich and poor, make the rich richer and the poor poorer.

DISCUSSION AND COUNTERMEASURES

Based on time series data from 1978 to 2017, the nominal interest rate and real interest rates in China and savings through linear regression model and quantitative analysis of vector autoregressive model, the nominal interest rate and real interest rates on the impact of China's savings in the opposite direction, the effect of the nominal interest rate is greater than the real interest rate on the role of saving in China, so as to get the Chinese residents' savings under in negative effect but the conclusion of the growth of large and high inflation rate under the condition of residents savings is still the public value method. In the long run, interest rates are becoming less sensitive to savings and should be made more sensitive.

The abnormal growth of Chinese savings under the negative interest rate effect shows that the monetary policy linked by interest rate cannot have corresponding effect, resulting in the ineffective allocation of social resources, and some appropriate policy measures should be taken to deal with this situation. Firstly, we will continue to liberalize interest rates. China should further promote interest rate liberalization, determine the interest rate according to market supply and demand, reduce the power of the central bank to control interest rate, make the interest rate more dependent on market fluctuations, influence consumption, savings and investment through the transmission channel of more stable interest rate, and exert the power of interest rate policy. Secondly, drive social groups to consume. Regulating the real estate market, establishing and improving the social security mechanism, and reducing the precautionary saving mentality of residents; We will broaden investment channels and increase people's optimistic anticipation, thus boosting their social consumption capacity and reducing "mandatory" savings. Thirdly, effective allocation of social resources. We will increase the efficiency of investment, accelerate the rapid flow of resources, and boost the development of the real economy.

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